

didly planned and sumptuously appareled reports on the geology of Maryland were fully matched by the corresponding series of reports on the climate and weather of the State. Moreover the two sciences were by no means held rigidly apart in his philosophical view of things. The contents of the elegant epoch-making first Report of the Maryland Weather Service in 1899 testified to Clark's broad understanding of the interrelation necessarily existing between geology and meteorology. The volume was full of promise for the climatologist in Maryland, and the promise was richly fulfilled. Taking advantage of his position as State Geologist, he inserted in each of the county geological reports a more or less detailed chapter on the climate of the county, prepared by an experienced climatologist. Thus there appeared with brief intermissions—

Climate of Allegany County, by O. L. Fassig. 15p. 1900.
 Climate of Cecil County, by O. L. Fassig. 13p. 1902.
 Climate of Garrett County, by O. L. Fassig. 21p. 1902.
 Climate of Calvert County, by C. F. von Herrmann. 37p. 1907.
 Climate of Saint Mary's County, by C. F. von Herrmann. 30p. 1907.
 Climate of Prince George's County, by W. H. Alexander. 21p. 1911.
 Climate of Ann Arundel County, by O. L. Fassig. 18p. 1917.

Again in the report of the Maryland Geological Survey, volume 6 (Baltimore, 1906), we find Clark devoting 14 pages (224–237) to a review of the general climate of the State in its bearings on the engineering, roadbuilding, and geological problems peculiar to Maryland.

The second and third volumes of the Maryland Weather Service, as the above quotations show, have also proven patterns and standards for subsequent similar publications for other regions. At least one other treatise, published in the United States in 1913, shows the strong influence exerted by the publications planned by Dr. Clark. E. L. Voss¹ states that he took the plan of Vol. II as a model for his own monograph on the rainfall of South America, being unable to find another work as good.

It is but just to point out here that in all this work for Maryland geology and climatology Prof. Clark secured and retained the hearty cooperation of the much wealthier respective Federal services,² as well as of the Maryland State Agricultural College (through Milton Whitney), so that his energy and address enabled the State to which he devoted his life's service to profit greatly by resources beyond its own confines. And not the State alone has profited. The strong State institutions he understood to build up were buttresses in time of need to Johns Hopkins University, and the most convincing proofs of how an advanced university increases the wealth of the State that harbors her, by training the sons of the State for higher labors in the service of that State.—C. A., jr.

Thomas Mikesell, 1845–1917.

By J. WARREN SMITH, Meteorologist in Charge.

[Division of Agricultural Meteorology, Weather Bureau, Aug. 25, 1917.]

In the death of Thomas Mikesell at Wauseon, Ohio, July 18, 1917, the world lost an earnest student of nature and a remarkable phenological record was brought to a close.

Mr. Mikesell was born on the homestead farm 1 mile north of Wauseon, August 9, 1845, and was the son of William and Margaret (Bayes) Mikesell, who moved from

western Pennsylvania in 1837. In June, 1863, he enlisted in Company H, Eighty-sixth Volunteer Infantry, and served until February 10, 1864.

Mr. Mikesell's special interest in meteorology dated from 1865, when he took up the study of Brocklesby's Meteorology. He soon began keeping a journal of the weather, and when, in the fall of 1869, he returned to the farm where he was born, he obtained some meteorological instruments and began a series of careful records that were not terminated until June 27, 1917, less than one month before his death. Beginning with 1882 self-registering thermometers were in use, but during all of the period he took eye readings three times daily, and

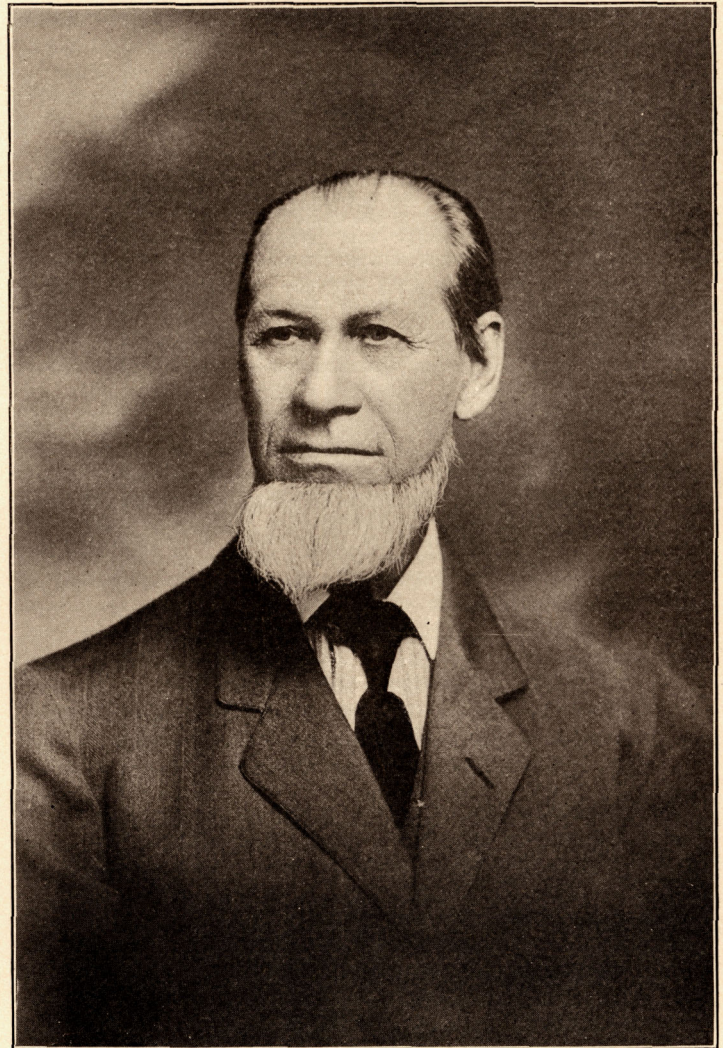


FIG. 1.—Thomas Mikesell, 1845–1917. Cooperative observer of the U. S. Signal Service, of the Ohio State Meteorological Service, and of the U. S. Weather Bureau from 1870 to 1917, at Wauseon, Ohio.

previous to 1882 frequent observations were made at the early morning and during the warmest part of the day to obtain the extremes of temperature for each twenty-four hours.

It was in the phenological observations, however, that the prodigious work of Mr. Mikesell, as well as his ability for observing and recording in detail passing events, was brought out. In Monthly Weather Review Supplement No. 2 (Washington, 1915) this bureau published tables showing a good many of the meteorological and phenological records kept by Mr. Mikesell. One table shows 8 different important dates in the development of 16 differ-

¹ Voss, Ernst Ludwig. Die Niederschlagsverhältnisse von Südamerika. Peterm. Mitteil., Ergänzb'd. 33, hft. 157. Gotha, 1907. See p. iv of the Vorrede.
² See MONTHLY WEATHER REVIEW, June 1895, 23:210; and Oct., 1899, 27:472–3.

ent kinds of fruits, together with the quality and quantity, from 1883 to 1912. Another gives 7 similar items for 20 different fruits and garden crops, another 8 items for 48 different fruit trees, shrubs, and vines, while a fourth table shows the dates of blossoming of 114 different plants during the period of discussion. Still other tables showed the daily maximum, minimum, and mean temperatures, and daily rainfall, the dates of first and last frosts, freezing weather; temperatures of 0°, 20°, and 90° F.; first and last snows, thunderstorms, etc.

Even these tables, however, include only part of the large number of records kept by this remarkable man. For example, the published table gives the following dates for the "King" apple: Buds started, first fully formed leaf, in full leaf, first bloom, full bloom, fruit ripe, complete change in foliage, divested of leaves, quantity of fruit, and quality of fruit; his manuscript records, however, show the same data for all the different varieties of apples raised in that vicinity. In the published tables data are given for the "Bartlett" pear, the "early Richmond" cherry, "Concord" grapes, etc., while his record covers all the different varieties of these various fruits that are grown in that latitude. The published table gives likewise the dates: Planted, above ground, in blossom, ripe, ready for use, per cent of good crop, and quality of crop, for 20 different field and garden crops;

but his record includes the same data for a large number of different varieties of all these crops.

His records were not confined to the life history of plants, but as might be expected from one who was so interested in the world of nature about him, he shows the movement of 60 different varieties of birds. The dates when each was first seen together with the number observed, date next seen, date when they became common, and the dates when last seen, were very carefully observed. He became an associate member of the American Ornithologist Union in 1885 and was a correspondent of this organization as well as of the Division of Economic Ornithology of the U. S. Department of Agriculture. His manuscripts also include some records for a great part of the insect and small animal life that may be found in rural districts in the latitude of his home in northwestern Ohio. Nothing escaped his eye apparently and the coming and going of a great variety of butterflies, moths, frogs, etc., *ad infinitum*, almost.

Quiet, unobtrusive, yet interested and taking an active part in the social, religious, and political life of his community, the wonderful thing is that any one man could find time for observing and keeping systematic record of so many different phases of the physical life which surrounded him.